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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,581	02/06/2001	Eyal Lichtman	2681/0I247	4780

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EXAMINER	
LI, SHI K	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/777,581	LICHTMAN ET AL.	
	Examiner	Art Unit	
	Shi K. Li	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) *1-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of species II in the reply filed on 16 June 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 1-20 are withdrawn as being directed to non-elected invention. The election requirement is made final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 21-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over admission (admitted prior art) in view of Archambault (U.S. Patent 6,476,945 B1) and Barnard (U.S. Patent 6,616,348 B1).

Regarding claims 21, 31 and 41, FIG. 2 (prior art) of the instant application discloses an apparatus for MAC based transmission in a WDM optical network. FIG. 2 (prior at) comprises OADM 32 with a first drop module 34 for dropping a first channel from a first fiber ring and a first add module 36 for adding a second channel to the first fiber ring, a second OADM 38 with a second drop module 40 for dropping a third channel from a second fiber ring and a second add module 42 for adding a fourth channel to the second fiber ring, a first MAC module with a first transmitter for providing said second channel and a receiver for receiving the first channel, a second MAC module with

a transmitter for providing said fourth channel and a receiver for receiving said third channel. The difference between admission (FIG. 2) and the claimed invention is the OADMs and MAC modules add/drop to/from the same fiber ring. Archambault teaches in FIG. 1 and bi-directional communication between two nodes should be routed using the short route. For example, traffic between node n and node n-1 should be routed using the span between node n and node n-1 and should not use the long route that pass through node 1, node 2, ... , node n-2. One of ordinary skill in the art would have been motivated to combine the teaching of Archambault with admission because this approach accommodates more traffic. Based on the teaching of Archambault, a MAC module should transmit to one fiber ring and receive from the other fiber ring. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the MAC module so that it transmits to one fiber and receiver from the other fiber, as taught by Archambault, in the apparatus of FIG. 2 (prior art) because this approach accommodates more traffic.

Barnard teaches in FIG. 1 to organize the add modules and drop modules so that modules for fibers to/from the east direction (left-hand side) are organized as OADM1 and modules for fibers to/from the west direction (right-hand side) are organized as OADM2. One of ordinary skill in the art would have been motivated to combine the teaching of Barnard with the modified apparatus admission and Archambault because if a OADM needs to be replaced, it only affects part of the traffic in the configuration of Barnard while a remove of a OADM in the modified arrangement of admission and Archambault affects all traffic. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to organize the OADM such that modules for fibers to/from the east direction (left-hand side) are organized as one OADM and

modules for fibers to/from the west direction (right-hand side) are organized as the other OADM, as taught by Barnard, in the modified arrangement of admission and Archambault because such arrangement is more reliable.

Regarding claims 22 and 40, admission (FIG. 2) teaches OADM 32.

Regarding claims 23-25 and 32-34, it is well known in the art that channel of same wavelength or different wavelengths can be used for bi-directional traffic between two nodes and for working and protection channels in different fibers.

Regarding claims 26-29 and 35-38, admission (FIG. 2) teaches Ethernet switch 66 connected to MAC modules 60 and 49.

Regarding claims 30 and 39, admission (FIG. 2) includes node B with arrangement similar to node A.

Regarding claims 42, admission (FIG. 2) includes node B with arrangement similar to node A. When the add module of OADM 32 and the drop module of the OADM in node B are tuned to the same wavelength, signal transmitted by transmitter 62 is receiver by MAC module in node B. Similarly, receiver 64 of node A receives signal transmitted by MAC module of node B. Note that in the modified network of admission, Archambault and Barnard, traffic from node A to node B is carried by fiber 46 and traffic from node B to node A is carried by fiber 48 because they are the shortest routes between node A and node B.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl

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